

Application No.: 10/541,700
Amendment dated: September 17, 2007
Reply to Office Action of March 16, 2007
Attorney Docket No.: 21295.0109US1

RECEIVED
CENTRAL FAX CENTER

SEP 17 2007

ABSTRACT OF THE DISCLOSURE

The invention relates to a confocal 4π microscopy method which is characterized by coherently illuminating a sample from two sides by one objective each with illumination light which has at least one illumination wavelength, whereby a stationary illumination wave having a main illumination maximum and secondary illumination maxima is produced by interference of the illumination light in the sample. The detection light emitted by the sample has at least one detection wavelength and is detected through the two objectives. The detection light is made to interfere, thereby producing in the sample a detection pattern having a main detection maximum, secondary detection maxima and detection minima in such a manner that the secondary illumination maxima and the detection minima overlap at least partially.